



# ***HARMONIC TRANSDUCER ELEMENT STRUCTURES AND PROPERTIES***

## **Abstract of Disclosure**

A transducer element for ultrasound reception comprises a first active transducer layer connected to a first receiver, and a second active transducer layer laminated to the first active transducer layer and connected to a second receiver. A transducer element for ultrasound transmission comprises a first active transducer layer connected to a first transmitter, and a second active transducer layer laminated to the first transducer layer and connected to a second transmitter. Further aspects of the present invention include a transducer element for ultrasound transmission and reception, a transducer array for ultrasound transmission and reception, and methods for transmitting and receiving ultrasound signals.

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